

ABSTRACT

The present invention relates to methods of producing an allelic series of modifications in genes of interest in a cell. In particular, the invention provides methods for using nucleic acid sequence-modifying agents (e.g., chemicals, electromagnetic radiation, *etc.*) to introduce modifications in any nucleic acid sequence in the genome of a cell. Also provided are sets of cells which contain at least one modification in any gene of interest. The methods and compositions of the invention are useful in determining the function of the gene of interest.